

PCT**REQUEST**

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference
(if desired) (12 characters maximum) PCT/99-45**Box No. I TITLE OF INVENTION**

CELLOBIOHYDROLASE REDUCED GLYCOSYLATION VARIANTS; CBHIN45A, CBHIN270A, AND CBHIN384A

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

MIDWEST RESEARCH INSTITUTE
425 Volker Boulevard
Kansas City, Missouri 64110
United States of America

 This person is also inventor.

Telephone No.

816/753-7600

Facsimile No

816/753-8420

Teleprinter No.

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant all designated all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box for the purposes of:

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

ADNEY, William S.
13190 West 21st. Avenue
Golden, Colorado 80401
United States of America

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant all designated all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box for the purposes of:

 Further applicants and/or (further) inventors are indicated on a continuation sheet.**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

 agent common representative

Name and address: (Family name followed by given name - for a legal entity, full official designation. The address must include postal code and name of country.)

Paul J. WHITE
National Renewable Energy Laboratory
1617 Cole Boulevard
Golden, CO 80401
United States of America

Telephone No.

303/384-7575

Facsimile No

303/384-7499

Teleprinter No.

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Form PCT/RO/101 (first sheet) (July 1998)

See Notes to the request form

Sheet No. -2-

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

DECKER, Stephen R.
820 Greenwood Drive
Berthoud, Colorado 80513
United States of America

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

LANTZ McCARTER, Suzanne
3072 West 39th Avenue
Denver, Colorado 80211
United States of America

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

BAKER, John O.
18790 West 60th Avenue
Golden, Colorado 80403
United States of America

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

NIEVES, Rafael
1794 South Endicott Street
Lakewood, Colorado 80401
United States of America

This person is:

 applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on another continuation sheet.

Sheet No. -3-

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

HIMMEL, Michael E.
9202 West Hialeah Place
Littleton, Colorado 80123-2148
United States of America

This person is:

- applicant only
 applicant and inventor
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

VINZANT, Todd B.
16601 W. 15th Avenue
Golden, Colorado 80401
United States of America

This person is:

- applicant only
 applicant and inventor
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

US

State (that is, country) of residence:

US

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

- applicant only
 applicant and inventor
 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

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This person is:

- applicant only
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 inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant for the purposes of: all designated States all designated States except the United States of America the United States of America only the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on another continuation sheet.

Sheet No. -4-

Box No.V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):
Regional Patent

- AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line)

National Patent (if other kind of protection or treatment desired, specify on dotted line):

- | | |
|---|---|
| <input checked="" type="checkbox"/> AE United Arab Emirates | <input type="checkbox"/> LC Saint Lucia |
| <input checked="" type="checkbox"/> AG Antigua and Barbuda | <input type="checkbox"/> LK Sri Lanka |
| <input checked="" type="checkbox"/> AL Albania | <input type="checkbox"/> LR Liberia |
| <input checked="" type="checkbox"/> AM Armenia | <input type="checkbox"/> LS Lesotho |
| <input checked="" type="checkbox"/> AT Austria | <input type="checkbox"/> LT Lithuania |
| <input checked="" type="checkbox"/> AU Australia | <input type="checkbox"/> LU Luxembourg |
| <input checked="" type="checkbox"/> AZ Azerbaijan | <input type="checkbox"/> LV Latvia |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina | <input type="checkbox"/> MA Morocco |
| <input checked="" type="checkbox"/> BB Barbados | <input type="checkbox"/> MD Republic of Moldova |
| <input checked="" type="checkbox"/> BG Bulgaria | <input type="checkbox"/> MG Madagascar |
| <input checked="" type="checkbox"/> BR Brazil | <input type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BY Belarus | <input type="checkbox"/> MN Mongolia |
| <input checked="" type="checkbox"/> BZ Belize | <input type="checkbox"/> MW Malawi |
| <input checked="" type="checkbox"/> CA Canada | <input type="checkbox"/> MX Mexico |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein | <input type="checkbox"/> MZ Mozambique |
| <input checked="" type="checkbox"/> CN China | <input type="checkbox"/> NO Norway |
| <input checked="" type="checkbox"/> CR Costa Rica | <input type="checkbox"/> NZ New Zealand |
| <input checked="" type="checkbox"/> CU Cuba | <input type="checkbox"/> PL Poland |
| <input checked="" type="checkbox"/> CZ Czech Republic | <input type="checkbox"/> PT Portugal |
| <input checked="" type="checkbox"/> DE Germany | <input type="checkbox"/> RO Romania |
| <input checked="" type="checkbox"/> DK Denmark | <input type="checkbox"/> RU Russian Federation |
| <input checked="" type="checkbox"/> DM Dominica | <input type="checkbox"/> SD Sudan |
| <input checked="" type="checkbox"/> DZ Algeria | <input type="checkbox"/> SE Sweden |
| <input checked="" type="checkbox"/> EE Estonia | <input type="checkbox"/> SG Singapore |
| <input checked="" type="checkbox"/> ES Spain | <input type="checkbox"/> SI Slovenia |
| <input checked="" type="checkbox"/> FI Finland | <input type="checkbox"/> SK Slovakia |
| <input checked="" type="checkbox"/> GB United Kingdom | <input type="checkbox"/> SL Sierra Leone |
| <input checked="" type="checkbox"/> GD Grenada | <input type="checkbox"/> TJ Tajikistan |
| <input checked="" type="checkbox"/> GE Georgia | <input type="checkbox"/> TM Turkmenistan |
| <input checked="" type="checkbox"/> GH Ghana | <input type="checkbox"/> TR Turkey |
| <input checked="" type="checkbox"/> GM Gambia | <input type="checkbox"/> TT Trinidad and Tobago |
| <input checked="" type="checkbox"/> HR Croatia | <input type="checkbox"/> TZ United Republic of Tanzania |
| <input checked="" type="checkbox"/> HU Hungary | <input type="checkbox"/> UA Ukraine |
| <input checked="" type="checkbox"/> ID Indonesia | <input type="checkbox"/> UG Uganda |
| <input checked="" type="checkbox"/> IL Israel | <input type="checkbox"/> US United States of America |
| <input checked="" type="checkbox"/> IN India | <input type="checkbox"/> UZ Uzbekistan |
| <input checked="" type="checkbox"/> IS Iceland | <input type="checkbox"/> VN Viet Nam |
| <input checked="" type="checkbox"/> JP Japan | <input type="checkbox"/> YU Yugoslavia |
| <input checked="" type="checkbox"/> KE Kenya | <input type="checkbox"/> ZA South Africa |
| <input checked="" type="checkbox"/> KG Kyrgyzstan | <input type="checkbox"/> ZW Zimbabwe |

Check-box reserved for designating States which have become party to the PCT after issuance of this sheet:

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)

Sheet No. -5-

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application: regional Office	international application: receiving Office
item (1) 13 July 1999 (13.07.99)	60/143,711	US		
item (2)				
item (3)				

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): item (1)

* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(III)). See Supplemental Box.

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / US

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year) Number Country (or regional Office)

Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request : 5
description (excluding sequence listing part) : 10
claims : 1
abstract : 1
drawings : 0
sequence listing part of description : 9

Total number of sheets: 26

This international application is accompanied by the item(s) marked below:

- fee calculation sheet
- separate signed power of attorney
- copy of general power of attorney; reference number, if any:
- statement explaining lack of signature
- priority document(s) identified in Box No. VI as item(s):
- translation of international application into (language):
- separate indications concerning deposited microorganism or other biological material
- nucleotide and/or amino acid sequence listing in computer readable form
- other (specify): Transmittal Letter to US/RO + Postcard receipt

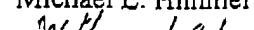
Figure of the drawings which should accompany the abstract:

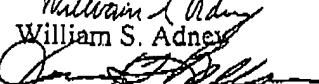
Language of filing of the international application: ENGLISH

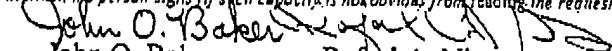
Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).


Michael E. Himmel


William S. Adney

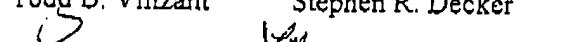

Jerry L. Bellows, Vice President
Midwest Research Institute


John O. Baker

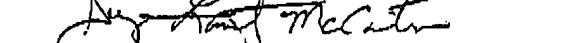
John O. Baker Rafael A. Nieves


Todd B. Vinzant

Stephen R. Decker


Suzanne McCarter

Lantz Lantz McCarter


Jerry McCarter

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1. Date of actual receipt of the purported international application:

3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:

4. Date of timely receipt of the required corrections under PCT Article 11(2):

5. International Searching Authority ISA / (if two or more are competent):

6. Transmittal of search copy delayed until search fee is paid.

2. Drawings:

received:

not received:

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

See Notes to the request form